

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Utilities Telecom Council and Winchester)	RM-11429
Cator, LLC)	
)	
Petition for Rulemaking to Establish Rules)	
Governing Critical Infrastructure Industry)	
Fixed Service Operations in the 14.0–14.5 GHz)	
Band)	

REPLY OF ARINC

ARINC Incorporated (“ARINC”) hereby replies to Comments and Oppositions filed in the above-referenced Petition for Rulemaking of the Utilities Telecom Council (“UTC”) and Winchester Cator, LLC (“Winchester,” and together with UTC, the “Petitioners”). Petitioners seek a secondary allocation in the 14.0–14.5 GHz band for Critical Infrastructure Industries (“CII”) communications and other commercial uses in non-emergencies.

ARINC agrees with many Commenters, including the Satellite Industry Association, the Global VSAT Forum, and others, that Petitioners have not shown a legitimate need to convert heavily used satellite spectrum to public safety use. The vast majority of parties in this proceeding also agree with ARINC that Petitioners’ proposal will generate harmful interference *both* to crucial satellite uplinks *and* to the proposed CII operations, especially during emergencies. Even comments in support of the Petition express concern about potential interference. Moreover, as explained by ARINC, Boeing, and SIA, adding a secondary terrestrial allocation is especially problematic for operational and planned mobile satellite services, which are currently authorized on a secondary basis with pending requests for primary status. For all of these reasons, the Commission should dismiss Petitioners’ request.

I. THE PETITION FAILS TO PROVIDE A SOUND BASIS FOR COMMENCING A RULEMAKING PROCEEDING

The Petition “plainly [does] not warrant consideration by the Commission”¹ and should be dismissed. The record contradicts Petitioners’ claimed urgency for additional spectrum, debunks their asserted ability to prevent harmful interference, and exposes their failure to satisfy the requirements for a petition for rulemaking. ARINC joins the great of majority of Commenters in urging the Commission to dismiss the Petition.

Petitioners cloak their proposal in alarmed concern for the integrity of public safety and emergency response systems. These concerns supposedly derive from an alleged scarcity of spectrum for CII communications. ARINC, of course, has no qualms with the Commission providing sufficient spectrum for public safety applications. However, the record contains no evidence that Petitioners require access to Ku-band satellite spectrum for public safety use.² Indeed, SES Americom, News Skies, and Intelsat affirm that UTC “could not substantiate or quantify utilities’ spectrum requirements” and that “no convincing demonstration has been made that existing fixed service spectrum allocations are insufficient.”³ Meanwhile, the Petition would put Winchester “in a position to charge a fee for and profit from access to 500 MHz of spectrum for new fixed service applications.”⁴ While such a result may be in UTC’s and Winchester’s private interests, Petitioners have not shown why it advances the public interest.⁵

¹ 47 C.F.R. § 1.401(e).

² See ARINC Opposition at 5; Artel Opposition at 4; Global VSAT Forum and European Satellite Operators Assn. at 15–16 (“GVF Opposition”); Hughes Opposition at 6; Row 44 Opposition at 6–7; SeaMobile Opposition at 3–4; SES Americom *et al.* Opposition at 7; Satellite Indus. Assn. Opposition at 16–17 (“SIA Opposition”).

³ SES Americom, *et al.* Opposition at 7.

⁴ *Id.* at 5.

⁵ See 47 U.S.C. § 307(a).

Furthermore, the Petition would allow Winchester to circumvent competitive bidding under the cloak of CII services. As Qualcomm observes, section 309(j)(2) of the Communications Act exempts from auction requirements “public safety radio services . . . [that] *are not made commercially available to the public.*”⁶ The Petition claims to be advancing public safety interests—yet would use the frequencies predominantly for commercial purposes.⁷ As SES Americom, New Skies, and Intelsat explain, “by any conceivable measure, commercial services would in fact be the dominant use of the proposed new allocation.”⁸ Even one of the proposed CII beneficiaries, Southern Company Services, Inc., admits that the new allocation would be used for “non-critical” applications.⁹ The public interest is not served by allowing a commercial entity to obtain use of a heavily congested satellite band in the guise of public safety.

Nor have Petitioners satisfied their burden of proof in demonstrating that authorizing new fixed networks would not cause harmful interference to current and future satellite systems in the band. To the contrary, the record reveals that Petitioners’ analysis is grounded on a series of unwarranted assumptions and unsupportable assertions. First, Petitioners present, and rely on, the interference trigger for co-primary service coordination (6% $\Delta T/T$) rather than a share of a 1 percent rise in the noise floor,¹⁰ as specified by the ITU¹¹--resulting in an astonishingly high

⁶ Qualcomm Opposition at 4 & n.4 (quoting 47 U.S.C. § 309(j)(2)).

⁷ *See id.* at 8 – 10; SES Americom *et al.* Opposition at 6.

⁸ SES Americom *et al.* Opposition at 6.

⁹ Comments of Southern Company Services, Inc. at 3.

¹⁰ *See* SIA Opposition at 6 (explaining that Petitioners erroneously rely on a 6% $\Delta T/T$ threshold, which is reserved for co-primary users, when they should be relying on an aggregate 1% threshold, applicable to secondary users); *see also* Boeing Opposition at 6; GVF Opposition at 10; Hispasat Opposition at 3; Hughes Opposition at 5 & nn.6–7; Row 44 Opposition at 4–5 & n.6; Satelites Mexicanos, S.A. DE C.V. (SATMEX) Comments at 2 (“SATMEX Comments”); SeaMobile Opposition at 5–6; SES Americom *et al.* Opposition at 8; Satellite Users Interference Reduction Group Opposition at 8 (“SUIRG Opposition”).

¹¹ International Telecommunication Union Radiocommunication Sector (“ITU-R”)

interference allowance threshold.¹² Second, effective coordination would be impracticable given the numerous terminals Petitioners foresee deploying and the ubiquitous, blanket-licensed VSAT stations already in the Ku-band.¹³ Third, Petitioners incorrectly presume current Ku-band uplinks are predominantly narrowband when many actually use spread spectrum technologies.¹⁴ And Commenters identify various other defects in Petitioners' analysis that undermine any confidence in their proposed interference mitigation techniques.¹⁵

Finally, the Petition is procedurally defective because it fails to supply proposed rules. ViaSat points out that, under the Commission's rules, a petition for rulemaking must "set forth the text or substance of the proposed rule."¹⁶ The Petition, however, "neither proposes any specific rule changes nor provides sufficient detail . . . to intuit the shape or substance of the rules . . . necessary to implement the proposal."¹⁷ It offers no specific technical or operational limits that might mitigate interference to incumbent services; nor does it narrow permissive use so as to ensure the spectrum "actually would be used to support [CII] communications that Winchester

Recommendation S.1432 (2006).

¹² See SIA Opposition at 14–15 (explaining that the Petitioner's claimed need for 99,999% availability equates to 26 seconds of outage per month, an extremely unlikely level due to interference in the band); Artel Opposition at 5–6; Boeing Opposition at 8; GVF Opposition at 16; Hispasat Opposition at 2–3; Hughes Opposition at 7; Row 44 Opposition at 6; SATMEX Comments at 3; SES Americom et al. Opposition at 11; ViaSat Comments at 8.

¹³ See Artel Opposition at 6; Hughes Opposition at 7; Row 44 Opposition at 6; SES Americom et al. Opposition at 10; SIA Opposition at 12–13; SUIRG Opposition at 5.

¹⁴ See ARINC Opposition at 5; Boeing Opposition at 8–9; GVF Opposition at 17–18; Hughes Opposition at 7; SeaMobile Opposition at 6; SES Americom et al. Opposition at 11; SIA Opposition at 10–11; SUIRG Opposition at 7; ViaSat Comments at 6–7.

¹⁵ These include failure to account for pointing errors, *see, e.g.*, SIA Opposition at 8, incorrect assumptions regarding power levels, *see* Boeing Opposition at 9, insufficient separation distances, *see, e.g.*, SIA Opposition at 11–12, and reliance on unproven technologies, *see, e.g.*, SUIRG Opposition at 7.

¹⁶ ViaSat Comments at 4 (quoting 47 C.F.R. § 1.401(c)).

¹⁷ *Id.* The requirement helps the Commission and private parties assess the usefulness of launching a rulemaking and conserves staff resources.

cites as the basis for its allocation proposal.”¹⁸ As such, the Commission should dismiss the Petition as procedurally deficient.

II. THE COMMISSION SHOULD RESOLVE THE PENDING AMSS AND VMES RULEMAKING PROCEEDINGS FIRST

The UTC/Winchester Petition should be dismissed as “premature.”¹⁹ As ARINC, Boeing, Row 44, and SIA all noted in the opening round, the Commission is considering requests to elevate Ku-band Aeronautical Mobile Satellite Services (“AMSS”)²⁰ and Vehicle-Mounted Earth Stations (“VMES”)²¹ to primary status. Neither the Petitioners nor comments filed in support of the Petition account for either the present or new and innovative AMSS and VMES use of the band. Instead, the Petition merely “acknowledges the difficulties in assessing the impact of existing and future MSS networks on its proposed services, stating ‘it is difficult to determine exactly how often the interference will occur.’”²²

This is an understatement. Evaluating the interference effects of a new, secondary terrestrial allocation while the AMSS and VMES rulemakings are pending would necessarily

¹⁸ *Id.* at 4–5.

¹⁹ 47 C.F.R. § 1.401(e).

²⁰ *Serv. Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, Notice of Proposed Rulemaking, 20 FCC Rcd 2906 (2005).

²¹ *Amendment of Parts 2 and 25 of the Comm’n’s Rules to Allocate Spectrum and Adopt Serv. Rules and Procedures to Govern the Use of Vehicle-Mounted Earth Stations in Certain Frequency Bands Allocated to the Fixed-Satellite Service*, Notice of Proposed Rulemaking, 22 FCC Rcd 9649 (2007).

²² Boeing Opposition at 12, n.26 (citing Petition, Technical Report at 20-21), *see also* ARINC Opposition at 3-4 (“Petitioners never analyze the effect of adding terrestrial fixed systems on AMSS, much less explain how their proposed new service would protect AMSS downlinks from harmful interference. Indeed, the technical appendix attached to the Petition (‘the RKF Report’) makes only a passing, generalized reference to MSS secondary users. It does not differentiate AMSS from VSAT systems or even distinguish MSS from FSS interference mitigation.”).

produce inexact conclusions. Further, as several Commenters note,²³ “the interference analysis will likely remain difficult as long as the service rules for VMES and AMES remain unsettled.”²⁴ Having neither analyzed nor accepted interference from AMSS and VMES links, Petitioners’ analysis is empty because “the outcome of [the pending] proceedings will dictate the interference environment that must be taken into account when assessing UTC/Winchester’s proposal.”²⁵ Much like placing the cart before the horse, considering Petitioners’ proposed terrestrial allocation before resolving pending satellite allocation proceedings is bad logic and a poor use of agency resources.²⁶

Were the agency inclined to launch a rulemaking addressing an added terrestrial fixed allocation in the Ku-band, ARINC recommends that the Commission:

- Resolve the still-pending AMSS and VMES proceedings by elevating AMSS and VMES to primary status in the 14.0–14.5 GHz band,²⁷ and finalize service rules that clarify interference priority in the event of future expanded uses of the band.²⁸
- Condition any future co-frequency terrestrial service on a phased-in deployment sufficient so that AMSS and VMES may “develop over a period of years before . . . [new allocations] substantially alter the interference environment in this band,” an approach suggested by Row 44.²⁹ This would allow the Commission, the Petitioners,

²³ See ARINC Opposition at 4; Boeing Opposition at ii, 2, 11-13; Row 44 Opposition at 2, 7-8; SIA Opposition at 8.

²⁴ Boeing Opposition at 12.

²⁵ *Id.* at ii; see also ARINC Opposition at 4; Row 44 Opposition at 7; SIA Opposition at 8.

²⁶ See *ITT World Commc’ns, Inc. v. F.C.C.*, 725 F.2d 732, 754–55 (D.C. Cir. 1984) (holding that the FCC “abused its discretion by implementing its *Authorized User II* policy prior to considering the direct access and independent earth station ownership issues,” which were germane to, and would directly affect, the policy; and stating that “an agency does not act rationally when it chooses and implements one policy and decides to consider the merits of a potentially inconsistent policy in the very near future”).

²⁷ See ARINC Opposition at 4–5; Reply Comments of ARINC, IB Docket No. 07-101 (filed Sept. 4, 2007).

²⁸ See ARINC Opposition at 4–5; Boeing Opposition at 11–13; Row 44 Opposition at 7; SIA Opposition at 8.

²⁹ Row 44 Opposition at 7.

and the public to assess meaningfully the likely impact of permitting any additional use of the band once the MSS operations are more developed and their effects on the band better understood.

In sum, the record reveals that the Petition inherently conflicts with the further-advanced AMSS and VMES rulemaking proceedings. As such, the Commission should dismiss the Petition as “premature” under § 1.401 of the Commission’s rules.³⁰ Alternately, ARINC urges the Commission to complete the pending AMSS and VMES proceedings before proposing any rule change to add a terrestrial allocation in the 14.0–14.5 GHz band.

III. CONCLUSION

The Commission should dismiss the UTC/Winchester Petition as contrary to the public interest. ARINC joins the view several other Commenters that the proposed new terrestrial allocation is intended to serve the commercial interests of Winchester rather than the stated CII interests. Moreover, the Petition does not adequately protect against harmful interference to either current users or the proposed CII users. The record also makes clear that the Commission should resolve the pending AMSS and VMES proceedings before any consideration of fixed service use in the 14.0–14.5 GHz band. If the Commission decides to consider such use, it should elevate AMSS to primary to protect from harmful interference from secondary users.

³⁰ 47 C.F.R. § 1.401(e).

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CERTIFICATE OF SERVICE

I, Pam Conley, do hereby certify that on August 11, 2008, I served a copy of the Reply of ARINC Incorporated upon the following parties by U.S. first-class mail, postage pre-paid:

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